



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/542,686

09/05/2006

Youichi Tabei

13450/1

1617

26646 7590 11/13/2008

KENYON & KENYON LLP  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

JENNINGS, STEPHANIE M

ART UNIT

PAPER NUMBER

4135

MAIL DATE

DELIVERY MODE

11/13/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,686	<b>Applicant(s)</b> TABEL ET AL.	
	<b>Examiner</b> STEPHANIE JENNINGS	<b>Art Unit</b> 4135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20050719</u> .  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

***Drawings***

The drawings are objected to because figure 1 does not sufficiently illustrate the claimed invention and the figure descriptions are not descriptive enough as identical titles are used for different drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "31", "41" and “51” have been used to designate the peripheral wall, reference characters "42", "52" and “72A” have been used to designate the bottom, reference characters "43" and "53" have both been used to designate the internal boss, reference characters "44" and "54" have both been used to designate the external boss, reference characters "41A" and

Art Unit: 4135

"51A" have both been used to designate the external flange, reference characters "61", "63" and "72" have been used to designate the boss, reference characters "62" and "73" have both been used to designate the thin annular portion. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 11 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 11 claims a peripheral wall thinner than the bottom, yet this is claimed previously in Claim 5.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Art Unit: 4135

Claims 10, 13, and 17 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Backward drawing is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the "Best Mode of Carrying out the Invention" section, a reference is made to "forward/backward drawing", yet only a reference to forward drawing is made in the claims. The claims have been examined "as best understood"

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear in the claim what the "bottom" refers to. The claim has been examined "as best understood".

Art Unit: 4135

***Claim Rejections - 35 USC § 102***

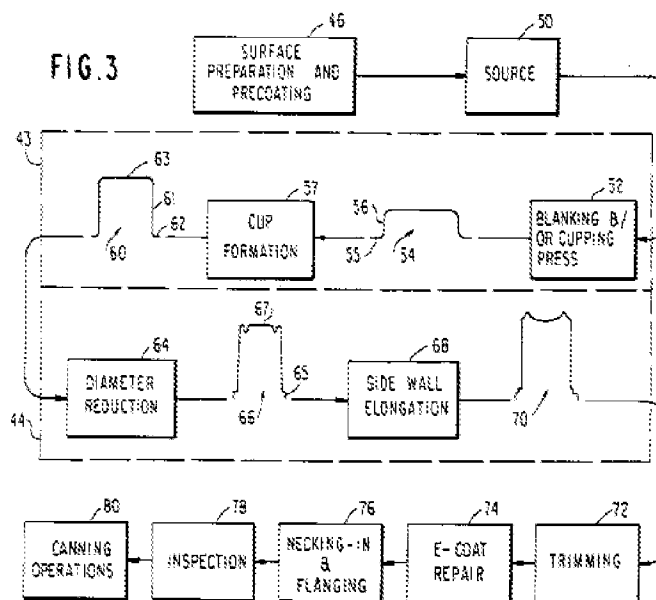
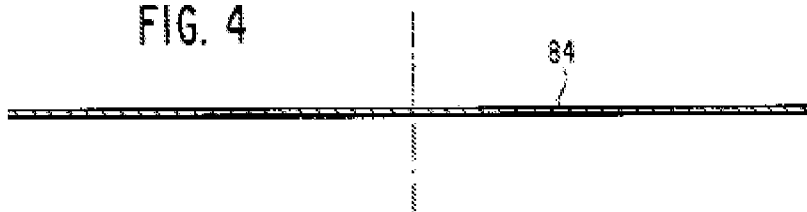
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

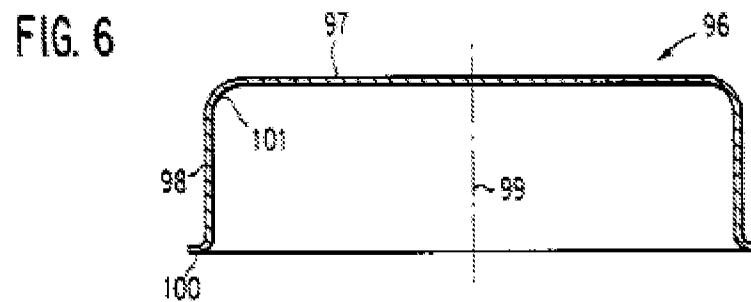
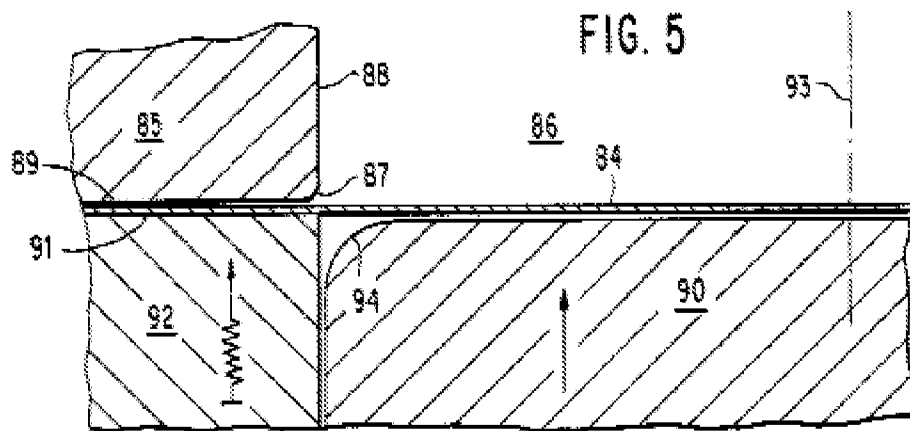
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-2 and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Saunders US Patent No. 5,987,951.

Saunders anticipates:

**FIG. 4**



Limitations from claim 1, A method of forming by forging material, characterized in that the method comprises: a first step of preparing sheet material (84, figure 4 above and 46, figure 3 above), and a second step in which a thickness of a circumferential portion of the material is made thinner than a thickness of a center portion of the material (abstract, lines 4-10) (figures 4-6).

Limitations from claim 2, A method as claimed in claim 1, wherein the first step is a step of blanking sheet metal (column 2, lines 3-4) (figure 5).

Limitations from claim 6, a method as claimed in claim 5, wherein the first step is a step of blanking sheet metal (column 2, lines 3-4) (figure 5).



Art Unit: 4135

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

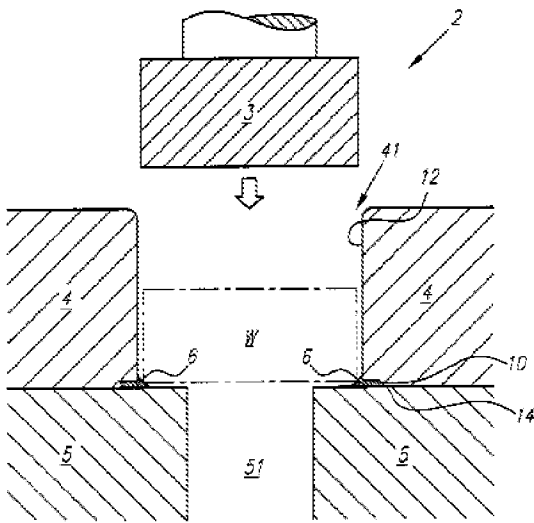
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 7-8, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders US Patent No. 5,987,951 as applied to claims 1 and 5 above, and further in view of Kataoka US Patent No. 6,000,269.

Saunders teaches limitations from claims 1, 5, and 17, but does not teach a method of stamp-forming a concavity or forging a case, but Kataoka does.

Kataoka teaches:

**FIG. 2A**

Limitations from claim 3, A method as claimed in claim 1, wherein the second step is a step of simultaneously stamping-forming a concavity in the center portion of the material (figure 2A above, column 3, lines 46-64).

Limitations from claim 7, A method as claimed in claim 5, wherein the second step is a step of simultaneously stamping-forming a concavity in the center portion of the material (figure 2A above, column 3, lines 46-64).

Limitations from claim 8, a method as claimed in claim 5, wherein the second step is a step of forming by forging (column 3, lines 46-64).

Limitations from claim 15, a method as claimed in claim 7, wherein the second step is a step of forming by forging (column 3, lines 46-64).

Limitations from claim 17, simultaneously stamping-forming a concavity in the center portion of the material (figure 2A above, column 3, lines 46-64).

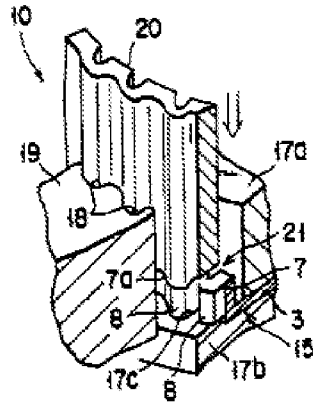
Art Unit: 4135

It would have been obvious at the time of invention for one of ordinary skill in the art to combine Kataoka's invention with Saunders' invention because it is a well-documented method in the art to stamp-form a concavity during case or cup formation.

Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders US Patent No. 5,987,951 as applied to claims 1 and 5 above, and further in view of Maeda US Patent No. 5,732,587.

Saunders teaches limitations from claims 1 and 5, but does not teach a method of upsetting, but Maeda does.

Maeda teaches:



**FIG. 4C**

Limitations from claim 4, a method as claimed in claim 1 or 3, wherein the second step is carried out by upsetting (figure 4C above and column 5, lines 5-10).

Limitations from claim 9, a method as claimed in claim 5, wherein the second step is carried out by upsetting (figure 4C above and column 5, lines 5-10).

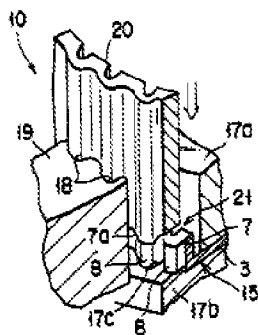
Art Unit: 4135

It would have been obvious at the time of invention for one of ordinary skill in the art to combine Saunders' invention with Maeda's invention because it is well-known in the art that upsetting provides increased ductility in the radial and tangential directions of the work piece.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders US Patent No. 5,987,951 and Kataoka US Patent No. 6,000,269 as applied to claims 5 and 7 above, and further in view of Maeda US Patent No. 5,732,587.

Saunders teaches limitations from claim 5 and Kataoka teaches limitations from claim 7, but neither teaches a method of upsetting, but Maeda does.

Maeda teaches:



**FIG. 4C**

Limitations from claim 16, a method as claimed in claim 7, wherein the second step is carried out by upsetting (figure 4C above and column 5, lines 5-10).

It would have been obvious at the time of invention for one of ordinary skill in the art to combine Saunders' and Kataoka's inventions with Maeda's invention because it is well-known in the art that upsetting provides increased ductility in the radial and tangential directions of the work piece.

Art Unit: 4135

Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saunders US Patent No. 5,987,951 as applied to claim 5 above, and further in view of Fukushima US Patent No. 5,950,480.

Saunders teaches limitations from claim 5, but does not teach a multiple-step forging method with boss formation, but Fukushima does.

Art Unit: 4135

Fukushima teaches:

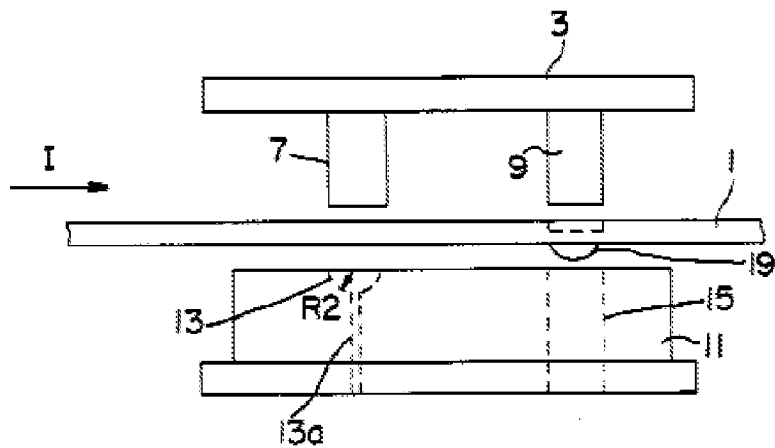


FIG. 5

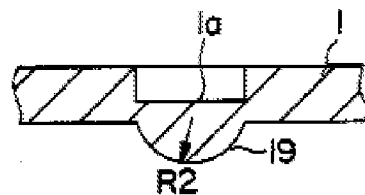


FIG. 6

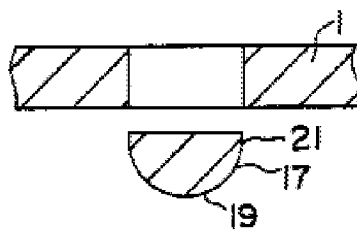


FIG. 7

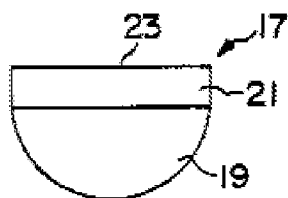


FIG. 8

Art Unit: 4135

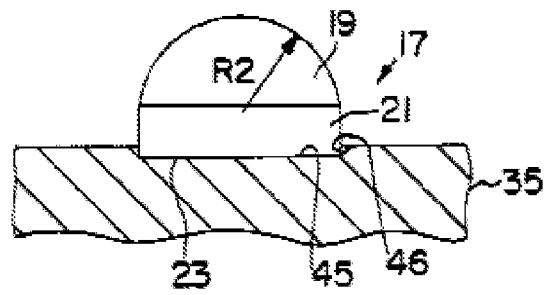
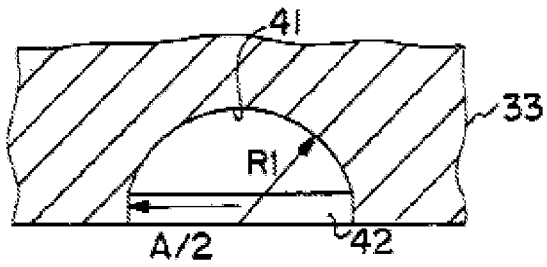


FIG. 9(a)

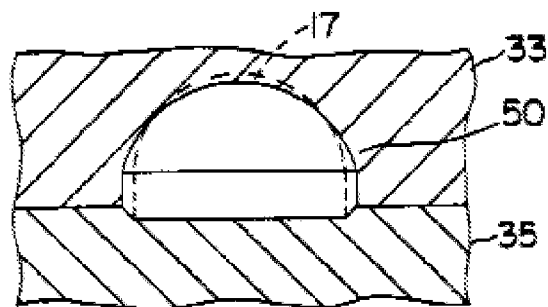


FIG. 9(b)

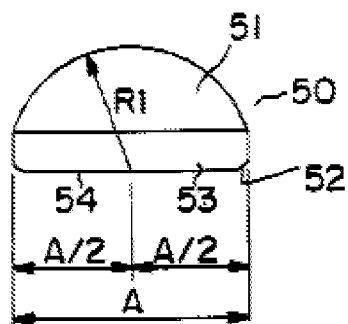
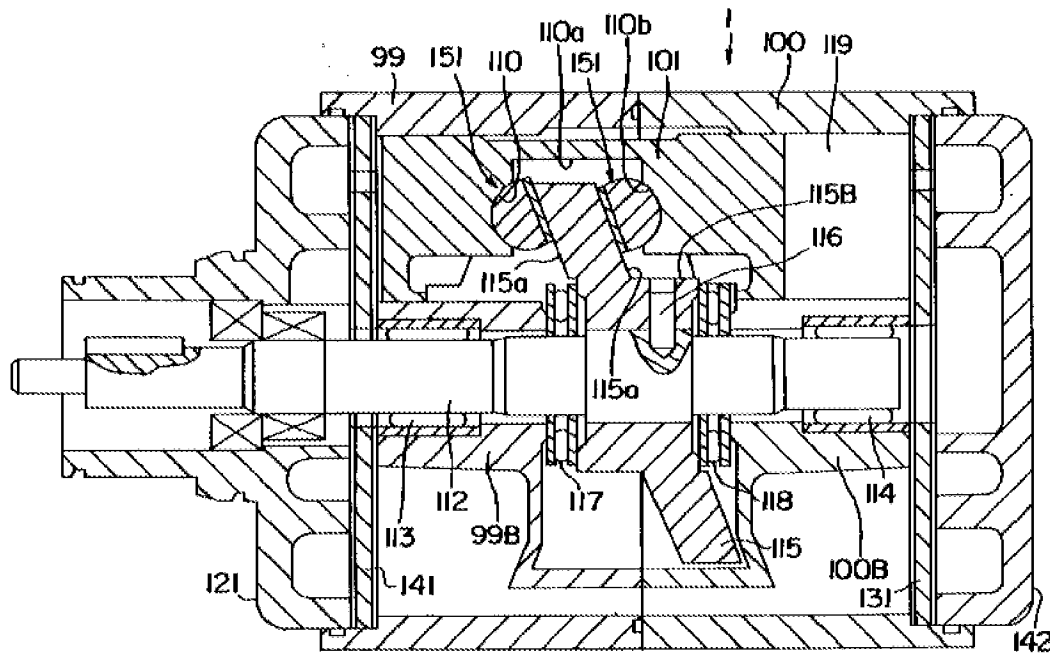


FIG. 10

**FIG. 1**

Limitations from claim 10, A method as claimed in claim 5, further comprising a third step in which an intermediate product (figure 7) obtained by the second step is forward drawn to simultaneously form the peripheral wall (15, figure 5 above) and bottom of the case (11, figure 5 above) (column 4, lines 10-21).

Wherein Saunders further teaches limitations from claim 11, a method as claimed in claim 10, wherein, if a is a thickness of the peripheral wall and b is a thickness of the bottom,  $a < b$  (abstract, lines 4-10).

Limitations from claim 12, A method as claimed in claim 5, wherein an intermediate product obtained by the second step is forward drawn to form a case peripheral wall, and then to form an internal boss (115b, figure 1 above) (figure 5 above).



Art Unit: 4135

Limitations from claim 13, A method as claimed in claim 5, wherein an intermediate product obtained by the second step is forward drawn to simultaneously form the case peripheral wall and the internal boss (115b, figure 1 above) (figures 7-9).

Limitations from claim 14, a method as claimed in claim 5, wherein an intermediate product obtained by the second step is annealed before being subjected to a subsequent step (column 3, lines 12-13).

It would have been obvious at the time of invention for one of ordinary skill in the art to combine invention with Fukushima's invention because multiple forming steps allows for improved finishing of the work piece and reduction in errors.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Saunders' and Fukushima's inventions because the use of the multiple-step boss formation would facilitate the formation of a thinner peripheral wall.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHANIE JENNINGS whose telephone number is (571)270-7392. The examiner can normally be reached on M-F, 7:30 am-5 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William M. Brewster can be reached on (571)272-1854. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

Art Unit: 4135

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. J./

Examiner, Art Unit 4135

October 30, 2008

/William M. Brewster/

Supervisory Patent Examiner, Art Unit 4135